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ABSTRACT

A study examined the attitudes and learning strategies, and their relationships to achievement, of university students enrolled in elementary Spanish (n=88) and elementary Japanese (n=121) for one academic year. For both groups of students, the classroom was seen as the most relevant context for language learning. Specific classroom behaviors demonstrating cognitive rehearsal, such as repeating new forms and taking notes, were positively associated with achievement. Selected individual behavior items (such as socializing with second language speakers, not being afraid to use the new language, and seeking exposure to the new language through media) enhanced second language proficiency. The only differences between persistent and non-persistent students were in two areas. In Spanish, the persistent students saw themselves as more interactive than the non-persistent, whereas in Japanese, the persistent students had more positive initial attitudes toward language study. It is concluded that progress and persistence in elementary foreign language study are shaped by several influences. Further research to refine strategy instruments sensitive to the contextual demands of language use and study, larger-scale studies, and case studies of language learning are recommended. A list of 11 references is included. (Author/MSE)

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UNIVERSITY FOREIGN LANGUAGE LEARNING: SPANISH AND JAPANESE

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TR10

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Center for Language Education and Research
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1988

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ABSTRACT

This study examined the attitudes and learning strategies--and their relationships to achievement--of university students enrolled in elementary Spanish (n = 88) and elementary Japanese (n = 121) for one academic year. For both groups of students, the classroom was seen as the most relevant context for language learning. Specific classroom behaviors demonstrating cognitive rehearsal, such as repeating new forms and taking notes, were positively associated with achievement. Selected individual behavior items (such as socializing with second language speakers, not being afraid to use the new language, and seeking exposure to the new language through media) enhanced second language proficiency. There were no differences between persistent and non-persistent students except in two areas. In Spanish, the persistent students saw themselves as more interactive than the non-persistent; whereas in Japanese, the persistent students had more positive initial attitudes toward language study. The report concludes with a summary of results and suggestions for future research.

Interest in the second language competence of Americans has stimulated increased attention to foreign language learning. Many students, however, have little or no instruction in languages other than English, and few possess the functional language skills needed for competent second language communication. In a national survey, for example, Rhodes and Oxford (1988) reported that only 22% of the nation's elementary schools offered any foreign language instruction. In addition to this general "second-language incompetence," very little is known about the process of foreign language learning. What factors constitute effective foreign language instruction? What characteristics differentiate persistent (and successful) and non-persistent (and unsuccessful) students?

To answer these questions, it is useful to examine the characteristics and behaviors of those students who are effective in acquiring a second language. Information from "good language learners" (Naiman, Frohlich, Stern, & Todesco, 1978) can be used for developing better theoretical models of learning, and for specifying directions for improving foreign language instruction.

The present study examined the learning strategies and opinions of language learners at the university level. We hoped to better understand the process of learning and the relationships between students' attitudes, behaviors, and various learning outcomes (cf. Gardner, 1987).

In a review of the research, Oxford (1986) noted that cognitive strategies can be important keys to the learning process, although many of the relevant studies in her review had limited generalizability in terms of student populations.

Attitudes and motivation have also been shown to affect learning outcomes. Gardner and Lambert (1972) proposed that motivation can be of two types: integrative motivation, or desire for more interaction with speakers of the target language; and instrumental motivation, or desire to learn a language in order to fulfill other goals (such as occupational advancement).

The purpose of this investigation was to examine the learning strategies and motivational factors in a sample of university students studying a foreign language. In order to broaden the generalizability

of this effort, students were selected from two programs of language instruction: elementary Spanish and elementary Japanese.

The general approach was to relate students' background characteristics, attitudes toward second language acquisition, learning strategies, and learning outcomes. More specifically, during the fall term, students were pre-tested on initial second language proficiency; and they were given two questionnaires, one regarding second language learning strategies, and one on general attitudes related to language study. Additional background information and achievement measures were also gathered.

Students' achievement was monitored for three quarters (one academic year). At the end of the year, students were post-tested to determine growth in skills. Results from the two questionnaires were then correlated with achievement and proficiency tests to determine how cognitive strategies and attitudinal factors were associated with learning. Also, comparisons between students who completed three quarters of study versus those who did not, identified the unique characteristics of persistent learners.

STUDY I: ELEMENTARY SPANISH

Methodology

Subjects

The study participants were 88 students (50 females, 38 males) enrolled in five different sections of Spanish I in the fall of 1985, at U.C.L.A. The classes met for five hours a week. Their academic status ranged from freshman to graduate. The mean age was 21.0 years (sd = 5.6). The main ethnic groups were White (59; 67%), Mexican or Hispanic (9; 10.2%), and Black (7; 8%), with the remaining 13 students from various other groups. Seventy-one (80.6%) of the students were native English speakers, the other 17 (19.3%) were from 12 different first language backgrounds, 2 of which were Spanish. Sixty-four (72.7%) of the students had studied a second language previously, although only 8 (12.5%) had previous exposure to Spanish.

Procedures and Materials

The investigator contacted all students in October, 1985, and asked them to take part in a descriptive study of second language learning. Volunteers were given a test of aural comprehension and an oral interview in Spanish to assess their initial levels of receptive and productive proficiency (see details below). During the fall quarter, students filled out two questionnaires, one regarding preferred second language learning strategies, and one pertaining to opinions about language study (see below).

The questionnaires and the comprehension test were given during class time; the oral interviews were individually scheduled with research assistants. At the end of each quarter, information was gathered on student attendance in class and in the language lab, and their final exam score and final course grade. During the last three weeks of spring quarter, 1986, those students who remained enrolled in the basic sequence were retested using the same Spanish oral interview and aural comprehension tests. At this time, too, additional information in the form of the students' overall grade-point average was collected to enable comparisons between language course performance and overall achievement.

Language Proficiency Tests. The Spanish Comprehension Test (SCT) was a forty-item measure of the ability to understand and follow simple instructions in Spanish, and to recognize pictures that matched stimulus sentences. The SCT, specifically developed for this study, was modeled on tests developed to assess comprehension of English as a second language in beginning- and intermediate-level students (see Politzer & McGroarty, 1985; Ramirez & Stromquist, 1979). The test was recorded by a native speaker of Mexican Spanish who read each item twice at a conversational pace. Reliability, determined by Cronbach's alpha, was .90.

The Spanish Oral Interview's (SOI) twenty items approximated a natural, face-to-face conversation about the student's family, daily routine, and academic schedule. The interview yielded a Total Score (later referred to as Total Interview or Interview Total) comprised of two subscores: an Information Score, reflecting the number of vocabulary items used, and a Structure Score, reflecting the correct

grammatical structure (that is, the correct inflection of verb forms). Interviews were administered by a Spanish speaking research assistant and recorded for later scoring. Inter-judge reliabilities ranged from 76% to 100% agreement, with an average agreement of 95% for the Information Score and 89% for the Structure Score.

Learning Strategy Questionnaire. The Learning Strategy Questionnaire consisted of three scales that assessed strategies used in the second language classroom (Scale A, 20 items, alpha = .73), behaviors used in interaction with others (Scale B, 23 items, alpha = .86), and strategies employed in individual study (Scale C, 21 items, alpha = .75). This questionnaire was based on one developed by Politzer and colleagues at Stanford University (see Politzer, 1983; Politzer & McGroarty, 1985), and subsequently used in other research on secondary-level students (Ramirez, 1986). Scale items are presented in Tables 2, 3, and 4.

Opinion Questionnaire. The Opinion Questionnaire (see Snow, Padilla, & Campbell, in press, for the derivation of the questionnaire) utilized a seven point Likert-like scale (ranging from strongly agree to strongly disagree) with 60 items assessing four dimensions (determined by factor analysis) of attitudes toward second language learning: (1) integrative motivation (20 items reflecting general interest in foreign languages; alpha = .87), (2) instrumental motivation (12 items concerning the utility of Spanish in Southern California; alpha = .84), (3) motivational intensity (9 items related to risk taking in the language class; alpha = .82), and (4) social support (6 items related to parental support of language study; alpha = .76). Cronbach's alpha for the entire scale was .89 (13 items were deleted due to low reliability).

Results

Achievement

Table 1 provides the pre- and post-test scores on the four Spanish proficiency measures. Students who remained in the language program through the completion of the post-tests showed strong gains in Spanish proficiency. These gains were most notable for Spanish Aural Comprehension, and somewhat less notable for the Oral Interview

Table 1

Pre- and Post Test Scores for Spanish Proficiency Measures

	Pre-tests			Post-tests			z^a
	n	$\bar{X}$	sd	n	$\bar{X}$	sd	
1. Spanish Aural Comprehension (Maximum 40)	76	13.65 (Range 3-36)	7.52	24	27.71 (Range 16-36)	5.14	6.153***
2. Oral Interview Total Score	65	57.06 (Range 5-115)	21.78	18	82.28 (Range 42-126)	18.44	4.233***
3. Oral Interview Information Score	65	41.55 (Range 4-77)	14.44	18	55.61 (Range 35-80)	11.53	3.732***
4. Oral Interview Structure Score	65	15.51 (Range 1-43)	9.05	18	26.67 (Range 7-48)	8.47	4.336***

a Difference score from Wilcox on Two-Sample Text with continuity correction

*** $p < .001$

Information Scores, but all Spanish proficiency measures showed increases with statistical probabilities less than .001 (see Table 1). Not surprisingly, these gains in Spanish proficiency were strongly interrelated (based on Spearman correlations). Comprehension Gain was related to the Total Interview gain (r = .57, n = 15, p < .05) and gain in Spanish Structures (r = .51, n = 15, p < .05); the Total Interview gain was related to Information gain (r = .95, n = 16, p < .01), and Structures gain (r = .77, n = 16, p < .01). Finally, Information gain was related to Structures gain (r = .59, n = 16, p < .01).

Learning Strategies

An examination of the means and standard deviations of the items in the learning strategy questionnaire yielded a portrait of those strategies that were most frequently--or most infrequently--utilized by the students in this sample (see Tables 2-4). In terms of strategies used in the second language classroom (Scale A), the two strategies most frequently cited were "guessing meaning from actions" (with a mean and standard deviation, respectively, of 5.37 and .93), and "guessing meaning from the context" (5.35, .72). The strategies least frequently utilized in the classroom were "use the second language voluntarily in class" (2.92, 1.41) and "ask the teacher for examples of rules" (2.87, 1.12).

Concerning strategies used in interaction with others (Scale B), the most frequently cited strategy was "correct myself when speaking" (5.13, .97); whereas the least frequently cited strategies were "use the second language with classmates outside of class" (2.52, .79), and "spell out the second language if I'm not understood" (2.52, 1.24). Means and standard deviations of all of Scale B items are in Table 3.

Finally, learning behaviors emphasized in individual study (Scale C) were "correct own pronunciation" (4.71, 1.33), and "get gist before looking up words" (4.66, 1.30); whereas those least utilized were "read second language newspapers or magazines" (1.95, 1.09), "write own second language journals" (1.95, 1.23), and "look up words in text or guide" (1.87, 1.14). Means and standard deviations for these scale items are in Table 4.

Table 2

Means and Standard Deviations of Learning Behaviors, Spanish I Students

Scale A. In the L2 Classroom (n = 48)

Rank	Item	$\bar{X}$	sd
1	Guess meaning from actions (A3)	5.37	.93
2	Guess meaning from context (A8)	5.35	.72
3	Interrupt self if error made (A7)	4.98	1.02
4	Take notes on new words (A18)	4.98	1.45
5	Say correct form to self if error made (A4)	4.92	1.14
6	Say answer to myself (A2)	4.70	1.07
7	Ignore things not understood (A17)	4.65	1.16
8	Go over errors on homework (A21)	4.54	1.33
9	Ask teacher to repeat (A15)	4.48	1.12
10	Compare answers with others (A19)	4.42	1.29
11	Integrate new material after class (A20)	4.25	1.16
12	Ask teacher about exceptions (A6)	4.04	1.18
13	Discuss lesson in English (A5)	4.02	1.31
14	Repeat words I don't know (A11)	3.81	1.16
15	Volunteer only if sure I'm correct (A16) (-)	3.79	1.41
16	Go over material after class (A9)	3.58	1.41
17	Avoid guessing based on examples (A14) (-)	3.23	1.03
18	Say correct answer to self (A1)	3.04	1.37
19	Ask when, by whom an expression is used (A10)	3.02	1.04
20	[Use L2 voluntarily in class (A13)]	2.92	1.41
21	Ask teacher for examples of rules (A12)	2.87	1.12

(-) item reversed in scoring

[ ] item deleted in final scale totals

Table 3

Scale B. In Interaction with Others (n = 23)

Rank	Item	$\bar{X}$	sd
1	Correct myself when speaking (B3)	5.13	.97
2	Ask L2 speakers for confirmation (B16)	4.83	1.07
3	Avoid L2 because of mental fatigue (B14)(-)	4.83	1.30
4	Ask others to repeat L2 (B2)	4.70	1.26
5	Rephrase if I'm not understood (B6)	4.65	1.11
6	Noticing items that don't fit rules (B15)	4.56	.89
7	Use new words in conversation (B5)	4.48	1.27
8	Ask L2 speakers for help (B1)	4.44	1.08
9	Guess meaning from gestures (B17)	4.39	1.20
10	Direct talk to familiar topics (B20)	4.13	.29
11	Use gestures if I don't know L2 words (B10)	4.09	1.27
12	Practice L2 with English speakers (B13)	4.09	1.37
13	Think first in English (B11)(-)	4.09	1.44
14	Keep silent rather than risk error (B4)(-)	3.91	1.04
15	Use English at L2 social events (B18)(-)	3.78	1.35
16	Use L2 with L2 speakers at job (B19)	3.56	1.97
17	Start conversation for L2 practice (B21)	3.48	1.65
18	Change known L2 sentences to fit (B22)	3.26	.96
19	Socialize with L2 speakers (B9)	3.17	1.50
20	Pretend to understand when I don't (B7)	3.13	1.14
21	Use memorized forms to keep talking (B8)	3.13	1.18
22	Use L2 with classmates outside class (B23)	2.52	.79
23	Spell out L2 if I'm not understood (B12)	2.52	1.24

(-) item reversed in scoring

Table 4

Scale C. In Individual Study (n = 38)

Rank	Item	$\bar{X}$	sd
1	Correct own pronunciation (C1)	4.71	1.33
2	Get gist before looking up words (C13)	4.66	1.30
3	Read sample sentences in dictionary (C10)	4.47	1.52
4	Pronounce words in dictionary (C4)	4.47	1.53
5	Spend extra time practicing L2 (C5)	4.03	1.33
6	Make vocabulary lists or cards (C9)	3.97	1.82
7	Analyze English/L2 contrasts (C3)	3.95	1.43
8	Look up new words before reading (C2)(-)	3.89	1.72
9	Associate new words with images (C18)	3.87	1.32
10	Generate many ways to say things in L2 (C21)	3.63	1.17
11	Memorize by association with English (C8)(-)	3.63	1.22
12	Describe actions or objects in L2 (C6)	3.58	1.50
13	Memorize new words by L2 grouping (C16)	3.29	1.39
14	Memorize sentences without analyzing (C12)	2.76	1.24
15	Attend language lab for extra time (C17)	2.61	1.62
16	Memorize sentences as units (C22)	2.32	1.07
17	Watch TV in L2 (C7)	2.26	1.25
18	Attend L2 movies (C20)	2.26	1.48
19	Listen to radio in L2 (C15)	2.16	1.28
20	Read L2 newspapers, magazines (C11)	1.95	1.09
21	Write own L2 dialogs or journal (C19)	1.95	1.23
22	[Look up words in text or guide (C14)]	1.87	1.14

(-) item reversed in scoring

[ ] item deleted in final scale totals

Learning Strategies and Achievement

Pre-test Scores. Pearson correlations were calculated between the items in Scale A (strategies used in the second language classroom) and the pre-test scores in Spanish proficiency. "Correcting answers aloud" (r = .37, n = 60, p < .01); and "ignoring what is not understood" (r = .31, n = 60, p < .05), were both positively related to each of the pre-test scores; whereas "going over the material in English before class" (r = -.36, n = 60, p < .01), was negatively associated with each of the pre-test measures.

Pearson correlations were also calculated between the items in Scale B (Interaction Strategies) and Scale C (Individual study strategies) with the four pre-test measures. Here, the only item uniformly related to each of the four pre-test scores was "using English at social events." This item was associated with lower scores for each pre-test measure: Comprehension Test (r = -.49, n = 41, p < .01), Interview Total (r = -.38, n = 35, p <.05), Information Score (r = -.35, n = 31, p < .05), and Structure Score (r = -.35, n = 35, p < .05). "Using the second language at the job" was positively related to the Comprehension Test (r = .37, n = 35, p < .05), the Interview Total (r = .38, n = 31, p < .05), and Information Score (r = .37, n = 31, p < .05). "Watching television in the second language" was positively related to Interview Total (r = .39, n = 47, p < .01), Information Score (r = .32, n = 47, p < .05), and Structure Score (r = .43, n = 47, p < .01).

Final Exams. The individual strategy items were correlated with the final exam scores for the fall, winter, and spring quarters. Three behaviors were significantly associated with the fall final exam: "saying answers aloud to oneself" (r = .25, n = 59, p < .05), "interrupting oneself" (r = .43, n=58, p < .05), and "analyzing contrasts between Spanish and English" (r = -.26, n=59, p < .05).

Negatively related to the winter exam scores were "guessing from examples" (r = -.40, n = 36, p < .01), "memorizing without analysis" (r = -.32, n = 37, p <.05), and "analyzing the contrasts between Spanish and English" (r = -.33, n = 37, p < .05). Positively related to winter final exam scores, in contrast, was "repeating new words" (r = .39, n = 36, p <.01).

Finally, "repeating new words" was positively related to spring final exam scores (r = .59, n = 21, p <.01), whereas "looking up words in the text" was negatively associated with Spring exams (r = -.59, n = 22, p < .01).

Course Grades. A somewhat similar pattern was evident in the correlations between the study strategies and the final course grades. The best predictors of fall grades were "guessing meaning from context" (r = .33, n = 57, p < .01), and "ignore what is not understood" (r = .30, n = 56, p < .05). Items with the strongest relationships with winter grades were "say form to self" (r = .36, n = 30, p < .05), "ask about exceptions" (r = .36, n = 30, p < .05), "repeat new words" (r = .37, n = 30, p < .05), "keep silent rather than risk error" (r = -.41, n = 29, p < .05), and "attend extra language labs" (r = .36, n = 30, p < .05). Items significantly related to Spring grades were "repeat new words" (r = .40, n = 28, p < .05), "correct self" (r = -.40, n = 25, p < .05), and "correct pronunciation" (r = .38, n = 27, p < .05).

Post-test Scores. Classroom behavior strategies (Scale A) that were related to post-test scores were: "ask about exceptions" (related to Comprehension score, r = .44, n = 23, p < .05; Interview total, r = .70, n = 17, p < .01; and Structure Score, r = .74, n = 17, p < .01); "ask when an expression" (related to Interview Total, r = .54, n = 17, p < .05); "ask teacher to repeat" (related to Interview Total, r = .59, n = 17, p < .01; and Information Score, r = .53, n = 17, p < .05); and "take notes on new words" (related to Structure Score, r = .48, n = 17, p < .05).

Several interaction strategies (Scale B) were also negatively related to Spanish proficiency. The two items with the most dramatic relationships were "Correct self when speaking," which was negatively related to Comprehension Score (r = -.56, n = 21, p < .01), Interview Total (r = -.69, n = 14, p < .01), and Information Score (r = -.65, n = 14, p < .01); and "Pretend to understand," which was negatively related to Interview Total (r = -.72, n = 14, p < .01), Information Score (r = -.64, n = 14, p < .05), and Structure Score (r = -.60, n = 14, p < .05).

Three items reflecting Individual Study Behaviors (Scale C), were also negatively related to proficiency. "Look up new words before

reading" was negatively related to Interview Total (r = -.55, n = 15, p < .05), and Information Score (r = -.57, n = 14, p < .05). "Attend language lab for extra time" was negatively related to Comprehension Score (r = -.41, n = 23, p < .05). And "Memorize sentences as units," was negatively related to Comprehension Score (r = -.47, n = 23, p < .05).

Learning Strategies and Gains in Language Proficiency

To assess gains in language proficiency, pre-post gains on the comprehension test and oral interview were calculated, and then correlated with the learning strategy items and scale totals. Because the number of students enrolled in spring was so small, the comparisons were done by means of rank-order and/or Spearman correlations.

Classroom Behaviors. Three items from Scale A (focusing on behaviors used in the second language classroom) were significantly related to gains in Spanish proficiency (all with n = 15): "going over material in English before class" was positively associated with gains in the Interview Total score (Spearman r = .50, p < .05) and Information gain (r = .58, p < .05); "focusing on the main point, while ignoring the rest," was negatively related to gains in the Interview Total (r = -.54, p < .05) and Information gain (r = -.57, p < .05); and "going over homework to check for errors" was negatively related to gains in structure scores (r = -.64, p < .01).

Interaction Strategies. Four items from Scale B (focusing on learning strategies used in interaction with others) were significantly related to gains in Spanish language proficiency (all using Spearman correlations): "asking others for help in the second language" was negatively related to comprehension gain (r = -.40, n = 20, p < .05), Total Interview gain (r = -.54, n = 14, p < .05), and Information Gain (r = -.54, n = 14, p < .05); "keeping silent rather than risk error" (reversed in scoring) was negatively related to Information Gain (r = -.51, n = 14, p < .05); "use new words in conversation" was negatively related to gains in the Total Interview (r = -.56, n = 14, p < .05) and Structure Gain (r = -.62, n = 14, p < .05); and "practicing the second language with bilinguals" was negatively related to gains in Structure Scores (r = -.54, n = 15, p < .05).

The Opinion Questionnaire

Table 5 presents the correlations among the total from the opinion questionnaire and each of its four factors with achievement data and two of the strategy scales. The total score was significantly related to the Spanish Comprehension Pretest, the Oral Interview Pretest, the Oral Interview Pretest Structure Score, Winter Quarter final exam scores and final grades, and Strategy Scale A. Factor I (reflecting an overall interest in language study) was significantly related to each of the pretest measures. Factor II (reflecting "integrative motivation") was only related to Winter Quarter final exam grades. Factor III (reflecting behaviors in the language class) was positively related to each of the pretest measures, the Spanish Comprehension Post-test, final exam grades for each of the three quarters, final course grades for winter quarter, and strategy scale A. Finally, Factor IV (reflecting parental and social support) was positively and significantly related to each of the pretest measures, final course grades for fall quarter, and Strategy Scales A and B.

Persistent Versus Non-Persistent Students

An additional goal of this study was to identify differences between persistent and non-persistent students. In a university setting, progress in a second language is usually a function of persistence. If we are interested in encouraging advanced levels of second language skill, therefore, it is useful to see if there is any way to determine who is most likely to complete such study.

In this sample, two methods of comparing persistent and non-persistent students were used. First, a series of t-tests and nonparametric procedures were used to compare persisters (n = 28) with non-persisters (n = 60) on pretest Spanish proficiency (the comprehension and oral interview), and opinion questionnaire totals and factor scores. The only difference that emerged was for the pretest scores of Spanish comprehension, where the persistent students ranked significantly higher than those who did not continue through the third quarter of study (Kruskal-Wallis Chi square approximation = 4.42, 1 df, $p < .05$). Thus, persistent students already possessed some Spanish comprehension skills at the outset, although their oral proficiency and

Table 5

Relationship of Learning Behaviors to Final Exam Scores
for Three Quarters
(Pearson Correlations)

Behavior	Exam 1 (Fall)	Exam 2 (Winter)	Exam 3 (Spring)
A2, Say answer to self	.25* (n=59)	n.s.	n.s.
A7, Interrupt self	.43* (n=58)	n.s.	n.s.
A11, Repeat new words	n.s.	.39** (n=36)	.59** (n=21)
A14, Guess from examples	n.s.	-.40** (n=36)	n.s.
C3, Analyze L1/L2 contrasts	-.26* (n=59)	-.33* (n=37)	n.s.
C12, Memorize w/o analysis	n.s.	-.32* (n=37)	n.s.
[C14, Look up words in text]	n.s.	n.s.	-.59** (n=22)

* $p < .05$
** $p < .01$

[ ] item deleted from final scale

attitudes toward the language were no different from students who did not persist.

Summary of Results for Elementary Spanish

Results from the elementary Spanish students have shown that second language achievement had positive associations with some strategies that can easily be used in the second language classroom. In terms of cognitive learning strategies, this sample reported more use of strategies related to in-class instruction (i.e., from Scale A), and these primarily had to do with guessing the meaning of the second language from the surrounding action or context.

The opinion questionnaire revealed that the factor contributing the most to student motivation was a combination of liking for other languages, and beliefs in the importance of Spanish for many instrumental and some general integrative reasons. The separate factors representing attitudes toward the Spanish language class and, to a lesser extent, parental support of Spanish, also demonstrated significant associations with Spanish achievement. The factor specifically related to local use of Spanish or Mexican American culture showed no such links. Taken together, these results provide a portrait of a group of second language learners whose main arena for study was the classroom, and who were most strongly motivated by a generally positive attitude towards languages, perception of the instrumental importance of Spanish, and enjoyment of the Spanish class itself.

STUDY II: ELEMENTARY JAPANESE

Methodology

Subjects

The participants in the study of elementary Japanese (the three-course sequence called 9A, 9B, and 9C at UCLA) consisted of 121 students (53 males, 68 females) who volunteered to take part in fall, 1985. The classes met in a large group lecture twice a week and was supplemented by three hours of drill sections a week with two different instructors. Academic status ranged from freshman to graduate, although the majority (72.7%) were freshmen, sophomores, or juniors.

Average age was 21.01 years (sd = 4.00). The four major ethnic groups in the sample were Japanese or Japanese-American (36; 29.8%), White (36; 29.8%), Chinese or Chinese-American (22; 18.2%), and Korean or Korean-American (11; 9.1%). There were also 3 Black and 3 Hispanic students (2.5% each), and a few individual students from other ethnic backgrounds. In terms of language characteristics, these students were generally comparable to those in the elementary Spanish courses in the nature and number of languages previously studied. A somewhat larger proportion of this group, however, claimed a native language other than English (usually an Asian language), although English was still the native language of over two-thirds of the sample. Few of the students (5) had previously studied Japanese, although 33 (27.3%) stated that they had some informal exposure to Japanese.

Procedures

Volunteers completed the learning strategy and opinion questionnaires, and a Japanese comprehension test, during fall quarter. Information on grades, class and language lab attendance, and exam scores, was collected at the end of each quarter. During the spring quarter, students were re-tested with the comprehension test, and information on overall achievement (the student's grade point average) was also collected.

Instruments

Japanese Comprehension Test. A 34-item comprehension test was developed to assess students' initial comprehension of Japanese. The test consisted of 10 items assessing ability to follow instructions (e.g., "Draw three small circles"), and 24 items requiring the student to select the correct picture from an array of four. The test was tape recorded by a native speaker of Japanese who read each item twice with a five-second pause between repetitions. Reliability was moderately high (alpha = .76).

The Learning Strategy Questionnaire. The students completed the language learning strategy questionnaire which asked students to rate the frequency with which they used various learning behaviors in three settings: (1) in the classroom (Scale A, 20 items, alpha = .81); (2)

in interaction with others (Scale B, 21 items, alpha = .72); and (3) during individual study (Scale C, 21 items, alpha = .83). Using the same items as in Study I, frequencies were based on a 1 (never) to 6 (always or almost always) scale, with an option available for "not applicable to me." A total of 83 students returned this questionnaire.

The Opinion Questionnaire. The measure of language learning motivation, completed by 94 of the 121 Japanese 9A students, was an opinion questionnaire similar to that used for the Spanish students described earlier. For the Japanese group, a 69-item questionnaire, using a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree), was constructed to reflect integrative/instrumental motivation, motivational intensity, perceived local and international importance of Japanese, and parental and social support of second language study. After elimination of seven items with negative item-to-total correlations, reliability of the opinion questionnaire was high (alpha = .86), and the resulting 62-item scale was used in all subsequent analyses.

The factor analysis yielded four factors, although only three of these demonstrated acceptable reliability. These were: Factor I (19 items, alpha = .84), which assessed general interest in foreign language and perceived importance and respect for the Japanese language and culture; Factor II (15 items, alpha = .83) was more specifically tied to the instrumental benefits of the Japanese language (i.e., jobs, future career); and Factor III (7 items, alpha = .83) focused on family and social support for the study of Japanese.

Results

Achievement

Analyses of the Japanese comprehension pre- and post-tests demonstrated highly significant increases from the pretest (mean = 13.89, SD = 5.72, n = 69) to the posttest (mean = 23.32, SD = 3.96, n = 43), with t (1,42 df) = 10.19, $p < .001$). (Because of the administrative arrangements required for testing, the pre-test was given in the seventh week of the first quarter of study; thus, it includes all the learning that was done in the initial weeks of

instruction and is a combination of baseline skill prior to the course and results of six weeks' instruction.)

The Learning Strategy Questionnaire

Means and standard deviations for the items in the three subscales of the Learning Strategy Questionnaire are presented in Tables 6, 7, and 8. Concerning Scale A, learning behaviors in the classroom, the most outstanding strategies used were "Take notes on new words" (mean = 5.21, SD = .90), "Guess meaning from actions" (4.85, 1.02), and "Interrupt self if error is made" (4.64, 1.08). The strategies least likely to be employed were "Say correct answer to self" (2.73, 1.19), "Ask teacher for examples of rules" (2.79, 1.12), "Ask when or by whom an expression is used" (2.81, 1.17), and "Use the second language voluntarily in class" (2.84, 1.16).

Concerning Scale B, assessing interactive behaviors, strategies most frequently employed were: "Avoiding the second language because of mental fatigue" (reversed in scoring, mean = 4.52, SD = 1.22), "Correct myself when speaking" (4.48, 1.01), "Ask second language speakers for help" (4.37, 1.18), and "Guess meaning from gestures" (4.30, 1.14). Strategies least likely utilized by these students were "Use the second language with second language speakers at the job" (2.70, 1.44), "Start conversation for second language practice" (2.78, 1.31) and "Use the second language with classmates outside class" (2.96, 1.26).

Concerning Scale C, assessing individual study behaviors, the strategies most frequently employed were: "Correct own pronunciation" (4.29, 1.19), "Get gist before looking up words" (4.23, .97), and "Pronounce words in dictionary" (4.19, 1.33). The individual study strategy least likely to be used was "Listen to radio in the second language" (1.65, .91). Other strategies that were unlikely to be used were: "Look up new words in text or guide" (2.50, 1.03), "Write own second language dialogs or journal" (2.63, 1.45), "Read second language newspapers or magazines" (2.63, 1.42), and "Memorize sentences without analyzing" (2.65, 1.14).

Table 6
Means and Standard Deviations of Learning Behaviors,
Japanese 9A Students
(Frequency scale from 1=never to 6=always)

Scale A. In the L2 Classroom (n = 67)

Rank	Item	X	sd
1	Take notes on new words (A18)	5.21	.90
2	Guess meanings from actions (A3)	4.85	1.02
3	Interrupt self if error made (A7)	4.64	1.08
4	Go over errors on homework (A21)	4.57	1.31
5	Discuss lesson in English (A5)	4.54	1.11
6	Guess meaning from context (A8)	4.54	1.13
7	Say correct form to self if error made (A4)	4.54	1.14
8	Ignore things not understood (A17)	4.37	1.18
9	Say answer to myself (A2)	4.34	1.09
10	Avoid guessing based on examples (A14)(-)	4.04	.94
11	Compare answers with others (A19)	3.99	1.25
12	Ask teacher to repeat (A15)	3.84	1.34
13	Repeat words I don't know (A11)	3.72	1.18
14	Ask teacher about exceptions (A6)	3.58	1.42
15	Integrate new material after class (A20)	3.52	1.28
16	/ Volunteer only if sure I'm correct (A16)(-) /	3.25	1.12
17	Go over material after class (A9)	3.13	1.24
18	Use L2 voluntarily in class (A13)	2.84	1.16
19	Ask when, by whom an expression used A10)	2.81	1.17
20	Ask teacher for examples of rules (A12)	2.79	1.12
21	Say correct answer to self (A1)	2.73	1.19

(-) item reversed in scoring
/ / item deleted in final scale

Table 7
Means and Standard Deviations of Learning Behaviors,
Japanese 9A Students

Scale B. In Interaction with Others (n = 27)

Rank	Item	X	sd
1	Avoid L2 because of mental fatigue (B14)(-)	4.52	1.22
2	Correct myself when speaking (B3)	4.48	1.01
3	Ask L2 speakers for help (B1)	4.37	1.18
4	Guess meaning from gestures (B17)	4.30	1.14
5	Ask L2 speakers for confirmation (B16)	4.11	.85
6	Use gestures if I don't know L2 words (B10)	4.07	1.21
7	Ask others to repeat L2 (B2)	3.96	1.22
8	Rephrase if I'm not understood (B6)	3.89	.85
9	Notice items that don't fit rules (B15)	3.74	1.13
10	Change known L2 sentences to fit (B22)	3.70	.87
11	Use new words in conversation (B5)	3.63	1.04
12	Direct talk to familiar topics (B20)	3.56	1.31
13	Keep silent rather than risk error (B4)(-)	3.41	1.05
14	Practice L2 with English speakers (B14)	3.41	1.25
15	Spell/write L2 if I'm not understood (B12)	3.37	1.11
16	Use memorized forms to keep talking (B8)	3.30	.95
17	Socialize with L2 speakers (B9)	3.30	1.46
18	/ Think first in English (B11)(-) /	3.04	1.19
19	Use English at L2 social events (B18)(-)	3.04	1.37
20	Use L2 with classmates outside class (B23)	2.96	1.26
21	/ Pretend to understand when I don't (B7)(-)/	2.78	.85
22	Start conversation for L2 practice (B21)	2.78	1.31
23	Use L2 with L2 speakers at job (B19)	2.70	1.44

(-) item reversed in scoring
/ / item deleted in final scale

Table 8
Means and Standard Deviations of Learning Behaviors,
Japanese 9A Students

Scale C. In Individual Study (n = 48)

Rank	Item	X	sd
1	Correct own pronunciation (C1)	4.29	1.19
2	Get gist before looking up words (C13)	4.23	.97
3	Pronounce words in dictionary (C4)	4.19	1.33
4	Associate new words with images (C18)	3.96	1.18
5	Spend extra time practicing L2 (C5)	3.67	1.37
6	/ Memorize by association with English (C8)(-) /	3.58	1.18
7	Look up new words before reading (C2)(-)	3.58	1.30
8	Make vocabulary lists or cards (C9)	3.58	1.51
9	Generate many ways to say things in L2 (C21)	3.52	1.07
10	Analyze English/L2 contrasts (C3)	3.48	1.09
11	Describe actions or objects in L2 (C6)	3.44	1.03
12	Read sample sentences in dictionary (C10)	3.40	1.45
13	Memorize new words by L2 grouping (C16)	3.25	1.52
14	Memorize sentences as units (C22)	3.00	1.22
15	Attend L2 movies (C20)	2.92	1.41
16	Attend language lab for extra time (C17)	2.92	1.45
17	Watch TV in L2 (C7)	2.79	1.38
18	Memorize sentences without analyzing (C12)	2.65	1.14
19	Read L2 newspapers, magazines (C11)	2.63	1.42
20	Write own L2 dialogs or journal (C19)	2.63	1.45
21	Look up new words in text or guide (C14)	2.50	1.03
22	Listen to radio in L2 (C15)	1.65	.91

(-) item reversed in scoring
/ / item deleted in final score

Learning Strategies and Achievement

To identify the learning strategies associated with second language achievement (i.e., final exam scores and course grades), the individual strategy items and scale totals were correlated with those outcomes. (None of the strategy scale totals showed significant associations with these measures.)

Classroom Strategies (Scale A). Of the items reflecting learning strategies in the second language classroom (n = 78 for each of the following relationships, unless otherwise indicated), "Asking the teacher to repeat" was negatively related to fall exam scores (r = -.27, p < .01) but unrelated to winter exam scores. None of the other classroom strategy items were related to fall or winter exam scores.

"Interrupt self" was negatively associated with fall grades (r = -21, p < .01), but unrelated to winter and spring grades. "Asking the teacher to repeat" was negatively associated with fall grades (r = -.37, p < .01) and winter grades (r = -.26, n = 58, p < .05). "Focusing on the main point, while ignoring the rest," was related to higher winter grades (r = .37, n = 57, p < .01); and "Taking notes on new words," was associated with higher grades in the fall (r = .28, p < .01).

Interaction Strategies (Scale B). Interaction strategies had limited relationships with achievement outcomes. Only three items were significantly related to final grades: "Paying attention to rules in talk" was positively related to spring grades (r = .32, n = 42, p < .05), and "Guessing meaning from gestures" was positively related to fall grades (r = .23, n = 69, p < .05).

Individual Study (Scale C). Three of the individual study items were related to exam scores: "Analyzing English/Japanese contrasts" was associated with lower winter exam scores (r = -.35, n = 53, p < .01); "Listen to Japanese radio" was positively related to winter exam scores (r = .28, n = 45, p < .05); and "Attend extra language lab" was negatively related to fall exam scores (r = -.25, n = 78, p < .05).

Two individual study strategies significantly predicted fall grades (but not winter or spring grades): "Watching Japanese language television" (r = .24, n = 71, p < .05), and "Trying different ways to

say things in Japanese" (r = .24, n = 77, p < .05), were positively associated with fall grades.

Relationship of Learning Strategies to Proficiency

Pre-test Scores. Results in Table 9 show that nine behaviors were significantly associated with pre-test scores, six with the post-test, and nine with gain scores. Taken together, the seven behaviors positively associated with the pre-test revealed students who already saw themselves as having enough proficiency and confidence to try to use and practice Japanese, to watch Japanese-language television, and to begin reading in the language. On the other hand, "conscious analysis of English/Japanese contrasts," and "making vocabulary lists," were negatively correlated with the pre-tests.

The behaviors positively associated with the post-test scores were "willingness to make guesses," "use Japanese in class," and "seek exposure to the language through media." One strategy, "integrating new material with old after class," was negatively associated with post-test comprehension scores. In addition, the adjusted scale total for Scale C, individual study strategies, showed a positive association with post-test scores (and a negative relationship with gains).

Relationship of Opinion Data to Learning Outcomes

The total opinion questionnaire score (based on the reduced scale of 62 items), and the three factor scores, were correlated with language achievement and the three strategy scale totals. These results are presented in Table 10.

These results suggested that students who received higher grades during the first quarter had slightly lower overall interest in second languages and Japanese, but had somewhat higher perceptions of family and social support for the study of Japanese. Those with very high instrumental motivation did well on the comprehension pretest and hence made relatively lower gains. Additionally, results using the factor scores in Table 10 also suggest that Factor III showed a moderate positive correlation (.36) with the comprehension pre-test, and a stronger negative relationship (-.50) with comprehension gains, again indicating that students with strong family support for the study of

Table 9
Relationship of Learning Behaviors to
Japanese Comprehension Test
(Pearson correlations)

Behavior	Pretest	Posttest	Gain Score
A4, Say correct form to self	.31* (n=56)	n.s.	-.52** (n=27)
A7, Interrupt self if error is made	n.s.	n.s.	-.49** (n=27)
A8, Guess meaning from context	n.s.	.45**	n.s. (n=36)
A13, Use L2 voluntarily in class	n.s.	.39**	n.s. (n=36)
A19, Compare answers with others	n.s.	n.s.	-.38* (n=27)
A20, Integrate new material after class	n.s.	-.36*	n.s. (n=36)
A21, Go over homework errors	n.s.	n.s.	-.43* (n=26)
B4, Keep silent rather than risk error	.26* (n=51)	n.s.	n.s.
B9, Socialize with L2 speakers	.32* (n=48)	n.s.	n.s.
/ B11, Think first in English(-)/	.30* (n=51)	n.s.	n.s.
B13, Practice L2 with bilinguals	.28* (n=51)	n.s.	n.s.
B17, Guess meaning from gestures	n.s.	n.s.	-.39* (n=24)
C3, Analyze English/L2 contrasts	-.29* (n=52)	n.s.	n.s.

Table 10
Relationships between Opinion Total, Three Factors, Language Measures, and Strategy Scales (Pearson correlations)

Variable	Opinion Total	Factor I (Overall)	Factor II (Instrumental)	Factor III (Parent Support)
Japanese Comprehension Pretest (n=67)	n.s.	n.s.	n.s.	.36**
Comprehension Gains (n=29)	n.s.	n.s.	n.s.	-.48**
Strategy Scale A (n=81)	.23*	n.s.	n.s.	n.s.
Strategy Scale B (n=81)	.35**	.31**	n.s.	.23*
Strategy Scale C (n=81)	.42***	.35***	.23*	.32**

* $p < .05$
** $p < .01$
*** $p < .001$

Japanese showed greater comprehension at the time of the pre-test, which may have contributed to lower gain scores due to ceiling effects.

Furthermore, the interrelationships between the opinion totals, motivational factors and strategy scales showed that students with a favorable total opinion profile rated themselves as making more frequent use of strategies in the classroom (Scale A), during interaction (Scale B), and in individual study (Scale C). Significant positive associations emerged between the overall interest factor (Factor I) and interaction and study strategies, and between study strategies and the instrumental and parental support factors.

Persistent Versus Non-Persistent Students

It was of interest to compare the characteristics of students who persisted through a full year of Japanese study, versus those who did not. As in the case of Spanish, two comparisons were made. Initially, a series of t-tests and nonparametric measures were calculated to compare the persistent (n = 43) and non-persistent students (n = 78; n varied for each measure) on initial comprehension of Japanese, and opinion questionnaire totals and factor scores. No significant differences between persisters and non-persisters were found on the initial comprehension measures. However, the persistent students tended to have higher mean scores on the opinion questionnaire (although not significantly). No differences were found for Factors I (overall interest) and III (parental support); but the persistent group had higher Factor II scores (instrumental motivation; Chi-square approximation = 3.03, 1 df, $p < .082$), indicating that persistent students tended to have stronger motivation to study Japanese for occupational or educational advancement.

On the opinion questionnaire, the students of Japanese who continued through three quarters of study tended to have stronger positive attitudes regarding language study in general, and the value of Japanese specifically.

Summary of Results for Elementary Japanese

Results from the strategy questionnaire showed positive associations between items such as willingness to make guesses about meaning,

use Japanese in class, seek exposure to the new language through media, and comprehension skills. Conscious analysis of differences between English and Japanese was not a useful strategy for these students.

The opinion factors that emerged were related to: (1) the overall value of second language study and of Japanese; (2) the instrumental value of Japanese study; and (3) parental and social support for the study of Japanese. The opinion questionnaire, as a whole, showed modest relationships with all of the strategy scales, demonstrating that students with higher overall motivation tended to make more frequent use of second language learning strategies.

Persistent and non-persistent students did not differ on any of the strategy scales; the only difference between them was that students who continued for three quarters had more positive attitudes toward general language study and the study of Japanese.

OVERALL SUMMARY AND DISCUSSION

Study I: Elementary Spanish

The results from the opinion questionnaire described a group of students who chose to study Spanish because they were favorably disposed towards language study, perceived it as useful for instrumental reasons, enjoyed language study, felt their parents encouraged it, and apparently already had some oral and aural skills in the language. As noted earlier, this sample of students reported most frequently using classroom learning strategies, and these focused on guessing the meaning of the second language from either action or context.

Although the analytic strategy capitalized on chance (by making a large number of pairwise comparisons), these results are similar to those found for high school students of Spanish (Muchnick & Wolfe, 1982).

Finally, the more specific integrative belief in the local utility of Spanish had no association (with one exception) with pre- or post-test proficiency measures, proficiency gains, or achievement.

Study II: Elementary Japanese

For the sample of students studying elementary Japanese, the whole complex of motivation reflected in the questionnaire total showed modest but positive associations with the use of each of the three types of learning strategies. In contrast to the results found for Spanish, greater use of interactive strategies and individual study strategies were related to overall second language and Japanese interest. The use of individual study strategies was also related to parental support, and, to a lesser but still significant extent, to instrumental goals for the study of Japanese.

Differences between these results and those obtained for the elementary Spanish students are instructive. The language class-related variables did not form a coherent factor here as they did in the data from the Spanish classes, perhaps because the instructional arrangements for the two classes were different: Students taking Spanish spent all of their five classroom hours per week in the same class, while those enrolled in Japanese had a large group lecture twice a week and took part in three hours of drill sections with two different instructors each quarter, making the notion of a single type of class with a certain environment less representative of their experience.

On the other hand, instrumental goals for second language study stood out more clearly from the overall interest factor in the Japanese data than in the Spanish, where they tended to load on the first factor which included general interest in second language study in addition to some integrative goals. Comparing students from the two language groups, it thus appears that those studying Japanese demonstrated a more sharply defined instrumental motivation than those studying Spanish. This latter finding may be unique to Southern California, because although a fourth of the students had some informal exposure to Japanese, the Japanese language is not nearly as omnipresent in Southern California as is Spanish.

Conclusions

These studies have suggested that progress and persistence in elementary foreign language study are shaped by several influences. In

both the Spanish and the Japanese samples, it was found that students had previously studied at least one foreign language and may have had some exposure to, or actual study of, the language in which they were enrolled. Although the range of initial skills in both languages was great, the students who continued through the full year of study made significant progress in all of the skills tested. For both languages, the persistent students were, in general, similar to those who did not persist except in two areas: in Spanish, the persistent students were more likely to see themselves as using interactive behaviors in the language; in Japanese, the persisters had higher self-perceived orientation toward language study and the study of Japanese.

Results of the learning strategy instruments showed that it was possible to identify learning behaviors used in the classroom and during individual study that predicted achievement in the second language. In general, results of the strategy instruments showed that using active learning behaviors, such as asking questions about rules and exceptions, and willingness to take risks in oral communication in the language class, were associated with achievement. Also, some behaviors oriented to language form, such as correcting one's own pronunciation of new words, saying answers aloud, or taking vocabulary notes, were positively correlated with learning. Conscious analysis of the differences between one's own language and the second language, however, was not helpful. Additional research with students at other proficiency levels will show how useful these (and other) strategies are in developing more advanced language skills.

Information from the opinion questionnaire demonstrated that attitudinal factors make a difference in second language learning. In both the Spanish and the Japanese samples, factors representing overall interest in foreign languages in general, the particular language chosen, and perception of parental and social support of language study, were significantly associated with various proficiency and achievement indicators. In the Spanish sample, a language class-related factor linked with achievement also emerged. In the Japanese classes, it was the instrumental value of second language study that showed additional positive associations with learning. Taken together, these results confirmed the validity of the motivational constructs

found in other research and also suggested that students in different language classes showed different motivational profiles according to the perceived personal, local, and international value of the language studied and the conditions of foreign language instruction.

Future Research

The additional questions resulting from this research are related to refinement of the instruments utilized in this investigation. To understand the associations between learning behaviors and foreign language achievement and proficiency more precisely, it would be helpful to have better instruments to assess aspects of second language skill which could then be related to strategies and achievement.

The development of strategy instruments sensitive to contextual demands of language use and study, in addition to frequency of strategy use, would promote more comprehensive theory about second language learning.

In addition, the study of larger groups of students using a prior causal framework would permit more precise validation of the socio-educational model proposed by Gardner (1987) in terms of the two languages studied here. Since the evidence indicates that somewhat different motivational patterns were characteristic of each group, it would be worthwhile to determine if causal models could accommodate such differences in order to provide a more differentiated formulation of foreign language learning.

Finally, a larger-scale study of effective foreign language learning should not replace individual case studies, which provide additional information on why and how students go about mastering a second language. The study of learning strategies would benefit from case studies which reveal the way students use strategies when engaged in specific learning tasks or situations. Research on attitudes and motivation would be enriched by detailed documentation of the reasons individual learners do or do not undertake, persist, and proceed in foreign language study. This information, too, would show what it means to be an effective language learner in various instructional contexts.

Thus, a variety of research approaches is required to adequately understand the process of foreign language learning. The pursuit of this research must continue if "second language competence" is to be effectively developed.

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